

## The fate of a Spotted Pardalote family in suburban Melbourne

### Introduction

The Spotted Pardalote *Pardalotus punctatus* (Fig. 1) is one of Australia's smallest birds: it is about 95 mm long and weighs only 9 g. Its usual habitat is eucalypt forests and woodlands, where it feeds in the treetops but, especially during autumn and winter, it also ventures into suburban areas where eucalypts abound. Its food consists mainly of arthropods, particularly psyllid larvae and lerp, but also manna from eucalypts. It is monogamous for at least one breeding season, and breeds from June to January (occasionally as late as March), sometimes raising as many as three broods in a season. The nest is usually in a chamber at the end of a tunnel in an earth bank, though other sites such as tree hollows are also used. The nest is made of strips of bark, grass and other plant materials, with an entrance generally in line with the tunnel. Usually four white eggs are laid, and the incubation period varies from 16 to 22 days. Both sexes build the nest and incubate the eggs (Higgins and Peter 2002).

### Spotted Pardalotes at Notting Hill

From mid-July to early August 2011, a pair of Spotted Pardalotes made their nest tunnel in a clay bank in our garden in the Melbourne suburb of Notting Hill. Little Wattlebirds *Anthochaera chrysoptera* chased them sometimes, but since the tunnel was near the boundary of the Little Wattlebirds' territory, the Pardalotes persisted, and were also undeterred by the intermittent presence of a Grey Butcherbird *Cracticus torquatus*.

We first saw the Pardalotes taking nest material into the tunnel on 9 August. After about 16 August we rarely saw the female, and from 19 August to 8 September (a period of 20 days) the site appeared to be abandoned. During this time, whenever we heard the birds call they were always a considerable distance from our place, never near the nest. Only constant surveillance, which was quite impracticable, would have told us that the nest was indeed occupied, and that eggs were being incubated.

It was on 9 September that we first noticed the birds entering and leaving the tunnel frequently,



Fig. 1. Male Spotted Pardalote, Warby Ranges, Victoria. Photo by John Barkla. Reproduced with kind permission from Bird Observation & Conservation Australia.

so presumably that was when the eggs hatched. It was not easy to see what was in their bills, but on some occasions I detected a white substance, which no doubt would have been lerp scale (as described by Richards 1972). At this time I discovered that they could 'speak with their mouths full', because the male (and possibly the female) often called just before taking food into the nest. At this stage the male sometimes called from other trees in our garden as well as from the two nearest the nest. Both birds delayed entering the tunnel if a Little Raven *Corvus mellori* or a Common Myna *Sturnus tristis* was near the entrance. At all times they moved extremely quickly when entering or leaving the tunnel. They would drop down from a branch of a nearby tree, and unless we were watching the tunnel entrance it was easy to miss seeing them enter or leave; even allowing oneself the luxury of blinking could mean not seeing the birds!

All this activity came to a sudden disastrous end on the morning of 16 September when a domestic cat *Felis catus* came into our garden and killed the adult birds. All that remained were some feathers on the ground near the tunnel entrance. The cat was observed trying to

get the young birds but couldn't reach them, so they starved to death.

### Investigation of the nest site

On 23 September I excavated the nest tunnel. The clay bank in which it was situated faced east and ran approximately north-south. The tunnel entrance was 500 mm below the top of the bank and 300 mm above the ground at the base. The tunnel sloped upwards at an angle of 20°, and sloped inwards from the east-facing side of the bank at an angle of 20°. The total length of the tunnel plus nest chamber was 300 mm, and the tunnel width was about 50 mm until it reached the nest chamber. The entrance to the chamber was 90 mm across, and the chamber itself was 90 mm long and roughly spherical, though narrowing slightly towards the end. Since it was situated near the north end of the bank, the chamber would have been warmed by the sun for part of the day.

The nest was a bulky structure, made of plant fibres tightly packed together. A large number of tiny black flies was in attendance, and there were some quite large blue and white maggots. I could not tell how many young birds there had been, because they had been devoured by the maggots and only a bit of very smelly mush remained in the bottom of the nest. Two Daddy Longlegs spiders had taken up residence, probably to make a meal of the flies and/or maggots.

On 7 October I decided to take a closer look at the nest. The spiders and flies had gone, and had been replaced by a few springtails, some very tiny beetles and a some even tinier ants. The nest material consisted of fine plant fibres, a few pieces of dead grass, and bark strips from *Eucalyptus* and *Melaleuca* spp. (Fig. 2). I estimated that there were between 1000 and 1200 pieces.

After pulling the nest apart I left it on the ground near the tunnel entrance. Two hours later, when I replenished the water in the nearby bird baths, it had vanished. Earlier that day I had seen a Little Raven collecting sticks from an area close to the bank, so this bird or its partner had probably taken the Pardalotes' nest material as well. Having watched Little Ravens collect pieces of old doormat in previous years, I have no doubt that this nest would have been very suitable for them to use.

### Conclusion

Spotted Pardalotes are remarkable birds. It must have taken a huge effort for them to dig their tunnel and nest chamber in the hard clay, and their strategy of making the nest site appear unoccupied during the incubation period was most impressive. We were delighted to have them nesting in our garden, and utterly dismayed to find that a cat had killed them. Cats are so numerous and such efficient killers that they must cause the death of many of these beautiful birds, which are most vulnerable when they are feeding young because they are compelled to make frequent visits to their nest. In our opinion, cat owners should be required to keep their pets confined to their own properties instead of allowing them to roam and destroy not only protected Australian wildlife but also the pleasure that many people gain from its presence.

### Acknowledgements

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### References

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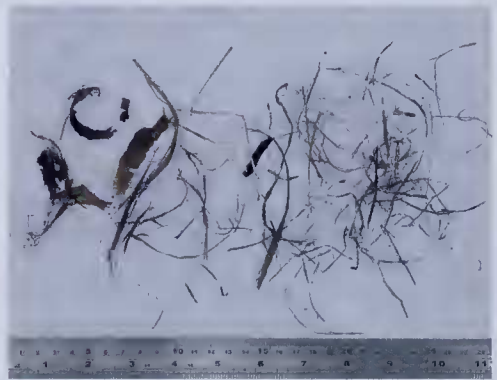


Fig. 2. Sample of nest material used by Spotted Pardalotes at Notting Hill.